LETTER TO THE EDITOR

Effectiveness of the Guidelines for the Non-Operative Management of Knee Osteoarthritis

Dear Editor

Despite being the commonest musculoskeletal disorder, knee Osteoarthritis (OA) has no consensual treatment guideline for its management. The variety of treatment guidelines creates confusion in the management of patients. Therefore, a consensus treatment guideline is necessary to manage these patients with evidence-based treatment modalities.

We have analyzed six existing guidelines on the non-operative management of knee OA [Table 1]. They included recommendations from the American Academy of Orthopaedic Surgeons (AAOS), National Institute of Health and Care Excellence, European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis and Musculoskeletal Disease, Osteoarthritis Research Society International (OARSI), The Royal Australian College of General Practitioners (RACGP), and the Cochrane review (1-5).

A consensus was found on the efficacy of self-management programs, land-based exercise, and weight loss. These guidelines do not recommend the use of acupuncture in OA and there was a mixed opinion for the use of physiotherapy modalities and orthotics. The non-steroidal anti-inflammatory drugs are recommended for pain relief, but along with their topical forms, their long-term use is not advisable. The effects of paracetamol on the early stages of the disease and opioids on the later stages of the disease are debatable. Furthermore, it should be noted that the use of glucosamine and chondroitin has been discouraged by most of these guidelines. Use of intra-articular steroids for acute pain and inflammation is recommended by the majority of guidelines, but not for

Table 1. Findings of various studies and their recommendations

	AAOS (2013)	ESCEO (2019)	NICE (2019)	RACGP (2018)	OARSI (2019)	Cochrane (2019)
Non-Pharmacological management						
1. Self-management program	Strong	Strong recommendation	Recommended	No recommendation	Conditional recommendation	No or small benefit
2. Land-based exercise	Strong	Strong recommendation	Recommended	Recommended	Strong recommendation	Recommended
3. Weight management	Moderate	Strong recommendation	Recommended	Recommended	Strong recommendation	N/A
4. Use of physical agents	Inconclusive	Recommended	Recommended	Conditionally recommended (transcutaneous electrical nerve stimulation)	N/A	Unclear
5. Manual Therapy	Inconclusive	Recommended	Recommended	Recommended	N/A	N/A
6.Off Loading knee braces (for medial osteoarthritis)	Inconclusive	Recommended	Recommended	Not recommended	N/A	Unclear
7. Lateral wedge insoles	Not recommended	Recommended	Recommended	Not recommended	N/A	Unclear
8. Acupuncture	Not recommended	N/A	Not recommended	Not recommended	N/A	Benefits are small

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Table 1. Continued

Pharmacological Management						
1.Glucosamine and chondroitin	Not recommended	Strong recommendation	Not recommended	Not recommended	N/A	Inconclusive (chondroitin) No benefit (glucosamine)
2.Oral Opioid	Strong	Weak recommendation	Recommended	Not recommended	N/A	No significant benefit
3.Topical non-steroidal anti-inflammatory drugs	Strong	Strong recommendation	Recommended	Not recommended	Strongly recommended	N/A
4.Oral non-steroidal anti-inflammatory drugs	Strong	Strong recommendation	Recommended	Recommended	Conditional recommendation	N/A
5.Paracetamol	Inconclusive	Not recommended	Recommended	Recommended	N/A	Minimal improvements
6.Opioid/pain patches	Inconclusive	Weak recommendation (end-stage arthritis)	N/A	Not recommended	N/A	N/A
7.Duloxetine	N/A	Weak recommendation	N/A	Recommended	Conditional recommendation	N/A
Intra-articular injections						
1.Corticosteroids	Inconclusive	Weak recommendation	Recommended	Recommended	Conditional recommendation	Unclear
2.Hyaluronic acid	Not recommended	Weak recommendation	Not recommended	Not recommended	Conditional recommendation	Support the use
3.Platelet-rich plasma and Stem cell therapy	Inconclusive	N/A	Special arrangement	No recommendation (platelet-rich plasma) Not recommended (stem cells)	N/A	N/A

AAOS: American Academy of Orthopaedic Surgeons, NICE: National Institute of Health and Care Excellence, ESCEO: European Society for Clinical and Economic Aspects of Osteoporosis Osteoarthritis and Musculoskeletal Disease, OARSI: Osteoarthritis Research Society International, RACGP: The Royal Australian College of General Practitioners

Stem cells and Platelet Rich Plasma therapy. Moreover, the use of Hyaluronic Acid is still debatable [Figure 1].

We noticed several discrepancies in these recommendations which can be explained by the fact that these varied groups represent different geographical areas, patient cohorts, as well as various existing and prevalent practice methods in their specialties and their particular geographical area. For example, the studied recommendations were from both surgical association (e.g. AAOS) and physician associations (e.g. RACGP, OARSI). The bias of the treating physician towards a particular treatment modality is based on their training. We believe that the acceptability of the patient is based on cost factors, ease of access to a particular treatment modality, social conditioning towards pain perception, and whether the treatment modality is covered by insurance or their healthcare provider or it is from out of pocket expenses. There could also be an organizational bias due to their commitment to a particular section of care providers like the government, general practitioners, surgeons, rheumatologists, or physical therapists.

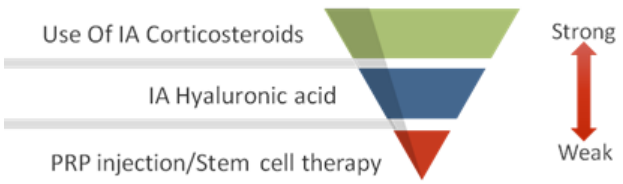

Figure 1. Recommendations for an intra-articular intervention for knee osteoarthritis.

We are aware that the standardization of recommendations is a difficult and challenging task due to various factors, like heterogeneity of patient

population, method of study, evaluation of the results, different stages of disease presentation, various lifestyles and activity demands, access to healthcare, co-morbidities, and demographic diversities. Although these recommendations are useful at large for the guidance of healthcare providers, they cannot be entirely applied to the clinical practice of every physician and surgeon. Much more work and white papers are required which are derived from the studies of large population groups from various parts of the world with the consideration of various individuals and demographic factors.

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